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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/929,267 | 08/14/2001 | Hans-Wulf Pfeiffer | 03466-P0001B | 9985 |

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ST. ONGE STEWARD JOHNSTON & REENS, LLC
986 BEDFORD STREET
STAMFORD, CT 06905-5619

EXAMINER

DERRINGTON, JAMES H

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1731

DATE MAILED: 09/06/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,267

Applicant(s)

PFEIFFER, HANS-WULF

Examiner

James Derrington

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other:

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brookes et al (5,128,083), Thomas et al (3,573,023) or the Abstract of JP04108675 in view of Rice et al (5,228,245).

Brookes et al (5,128,083) disclose the treatment of ceramic articles by subjecting the surface to plastic deformation (Col. 1, lines 35-38) whereby physical properties are improved (Col. 1, line 60 ff). Brookes et al (5,128,083) disclose engineering ceramics at Col. 1, lines 6-9 and indicate that the workpiece and the treating tool can be the same engineering ceramic material (Col. 2, lines 44-59). The shapes of the treating materials disclosed at Col. 1, lines 43-46 would suggest the use of a hammer or roller or nail to one of ordinary skill in the art as recited in claims 7-9 and 16-18.

Thomas et al (3,573,023) disclose the process of shot peening brittle (Col. 1, line 42) ceramic articles whereby the surface receives compressive stresses and the strength of the article is improved (See Col. 1, lines 40-48 and Col. 2, lines 1-71).

The Abstract of JP04108675 discloses a process of shot peening, barrel polishing or honing the surface of a ceramic article (points of maximum stress or the whole surface) whereby improved strength and crack resistance is obtained. JP04108675 discloses that shot peening can

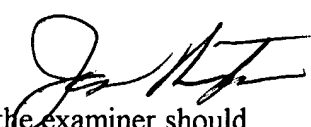
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be applied to the whole surface or points to be subjected to max. stress and this teaching would clearly suggest contacting the workpiece within a predetermined area that is less than the total surface area of the workpiece.

The instant process includes increasing the strength of brittle hard materials, i.e. ceramics, and clearly is inclusive of shot-preening ceramics (See instant specification, paragraphs 30 and 33). Thomas et al disclose the process of shot peening (Col. 2, line 43) brittle ceramic articles (Col. 1, lines 40-48) whereby the surface receives compressive stresses and the strength of the article is improved Col. 2, lines 69-71). The instant claims additionally recite the size of the tool that applies the compressive force. Rice et al (5,228,245) disclose a related process of strengthening ceramic materials where the size of the shot or blasting media can preferably be 600 microns, i.e. .6 mm. (Col. 2, lines 55-58). It would have been obvious to have used the claimed tool size since this size would be expected to perform in the art expected manner in view of the teachings of Rice et al.

The examiner does not agree with the description of the Brookes et al and Thomas et al as set forth in paragraphs 15 and 16 of the instant specification. Thomas et al teach both a room temperature and an elevated temperature embodiment (See Col. 3, lines 57-64 and compare claims 1 and 3 of Thomas et al. This reference clearly discloses the process conducted at room temperature. Similarly, Brookes et al teach that their process is "preferably ... at a sufficiently high temperature ..." . Further, Brookes et al recite elevated temperature at Col. 6, lines 12-14 but not Col. 4, lines 44-58).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Derrington whose telephone number is (703) 308-3832.
jd September 4, 2002



JAMES DERRINGTON
PRIMARY EXAMINER
ART UNIT 137